

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/046599 A3

(51) International Patent Classification⁷: **C07C 317/10, A61K 31/10**

(74) Agent: **MONACO, Daniel, A.**; Drinker, Biddle & Reath, LLP., One Logan Square, 18th and Cherry Streets, Philadelphia, PA 19103-6996 (US).

(21) International Application Number:
PCT/US2004/037293

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:
8 November 2004 (08.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/520,523 14 November 2003 (14.11.2003) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants (*for all designated States except US*): **TEMPLE UNIVERSITY - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION** [US/US]; Broad Street and Montgomery Avenue, Philadelphia, PA 19122 (US). **ONCONOVA THERAPEUTICS INC.** [US/US]; Suite 200, 993 Lenox Drive, Lawrenceville, NJ 08648 (US).

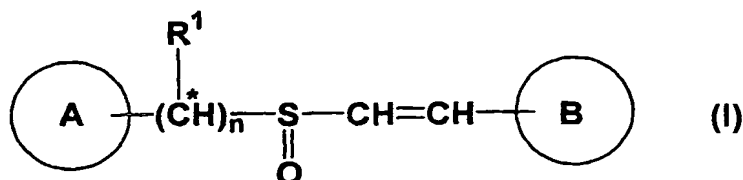
Published:
— with international search report

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): **REDDY, Premkumar, E.**; 547 Atterbury Road, Villanova, PA 19085 (US). **REDDY, Ramana, M., V.** [US/US]; 921 St. Joseph Drive, Upper Darby, PA 19082 (US). **BELL, Stanley, C.** [US/US]; 732 Braeburn Lane, Narberth, PA 19072 (US).

(88) Date of publication of the international search report:
6 October 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALPHA, BETA-UNSATURATED SULFOXIDES FOR TREATING PROLIFERATIVE DISORDERS



(57) Abstract: $\alpha\beta$ -Unsaturated sulfoxides of Formula I: (I) are useful as antiproliferative agents including, for example, anticancer agents, and as radioprotective and chemoprotective agents.